Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-22 (cancelled).

Claim 23 (previously presented): A method for providing temperature control to a plasma processing chamber of a plasma processing apparatus, said method comprising:

directly or indirectly measuring temperature internal to the plasma processing chamber;

comparing the measured temperature to a target temperature;

heating the plasma processing chamber by heating a plurality of thermal control blocks that include at least a heater element and a cooling element arranged around the sides of the plasma processing chamber such that the thermal control blocks are thermally coupled to the plasma processing chamber; and

cooling the plasma processing chamber by actively cooling the plurality of thermal control blocks so that the cooling is provided by the cooling element through the heating element.

Claims 24-25 (cancelled).

Claim 26 (previously presented): A method as recited in claim 23, wherein the thermal control blocks further include a thermal break element coupled between the heater element and the cooling element.

Claim 27 (currently amended): A method as recited in claim 23, wherein said method further comprises:

biasing the thermal control blocks against a roof portion of the plasma processing chamber.

Claims 28-31 (cancelled).

Claim 32 (previously presented): A method as recited in claim 23, wherein the thermal control blocks further include notches configured to prevent RF energy from coupling with the thermal control blocks.

Claim 33 (previously presented): A method for providing temperature control to a plasma processing chamber of a plasma processing apparatus, said method comprising:

directly or indirectly measuring temperature internal to the plasma processing chamber;

comparing the measured temperature to a target temperature;

providing a thermal control block that is thermally coupled to the plasma processing chamber, said thermal control block having a heating element and a cooling element with a thermal break element coupled between the heater element and the cooling element;

heating the plasma processing chamber by heating the thermal control block that is thermally coupled to the plasma processing chamber; and

cooling the plasma processing chamber by actively cooling the thermal control block so that the cooling is provided by the cooling element through the heating element.

Claim 34 (cancelled).

Claim 35 (currently amended): A method as recited in claim 33, wherein the method further comprises:

biasing the thermal control block against a roof portion of the plasma processing chamber.

Claim 36 (previously presented): A method as recited in claim 33, wherein the thermal block includes notches formed therein to prevent RF energy from coupling with the thermal control block.

Claim 37 (currently amended): A method for providing temperature control to a plasma processing chamber of a plasma processing apparatus, said method comprising:

directly or indirectly measuring temperature internal to the plasma processing chamber;

comparing the measured temperature to a target temperature;

heating the plasma processing chamber by heating a resistive heating block that is in physical contact with the roof of ~~thermal control block that is thermally coupled to~~ the plasma processing chamber;

cooling the plasma processing chamber by actively cooling the resistive heating block ~~thermal control block~~; and

preventing RF energy from coupling with the heating block ~~thermal control block~~.

Claim 38 (currently amended): The method as of claim 37, wherein preventing RF energy from coupling with the heating block ~~thermal control block~~ is accomplished by including notches in the heating block ~~thermal control block~~ to prevent RF energy from coupling with the heating block ~~thermal control block~~.

Claim 39 (currently amended): A method as recited in claim 38, wherein the cooling of the plasma processing chamber is accomplished using a cooling element in thermal contact with the resistive heating block wherein said cooling is accomplished by cooling the plasma processing chamber through the resistive heating block ~~through the same thermal control block that is able to heat the plasma processing chamber~~, thereby providing more uniform temperature profile to the plasma processing chamber.

Claim 40 (currently amended): A method as recited in claim 37, wherein said cooling of the plasma processing chamber by actively cooling the resistive heating block is accomplished by a cooling element in thermal communication with the heating block; and ~~the thermal control block includes at least a heater element and a cooling element, and~~

wherein said cooling is provided by the cooling element through the heating block ~~element~~.

Claim 41 (currently amended): A method as recited in claim 40, wherein ~~the thermal control block further includes~~ a thermal break element is coupled between the heating block ~~heater element~~ and the cooling element.

Claim 42 (currently amended): A method as recited in claim 23, wherein said method further comprises:

biasing the thermal control block against a roof portion of the plasma processing chamber.

Claim 43 (currently amended): A method as recited in claim 23, wherein said biasing the thermal control blocks against a portion of the plasma processing chamber includes spring biasing the thermal control blocks against a roof portion of the plasma processing chamber.

Claim 44 (new): The method as of claim 40, further including preventing RF energy from coupling with the heating block and the cooling element said coupling being prevented by including notches in the heating block and the cooling element to prevent RF energy from coupling with the heating block and the cooling element.